

gravity of 1.40 (15.56 °/15.56 °C.) and the mixture allowed to stand until completely separated into two layers. The amount of pyridine base layer should be 18.5 ml, minimum.

#### §21.122 Pyronate.

Pyronate is a product of the destructive distillation of hardwood meeting the following requirements:

(a) *Acidity (as acetic acid)*. Not more than 0.1 percent by weight, determined as follows:

Add 5.0 ml sample to 100 ml distilled water in an Erlenmeyer flask and titrate with 0.1 N NaOH to a bromthymol blue endpoint.

(b) *Color*. The color shall be no darker than the color produced by 2.0 grams of potassium dichromate in 1 liter of water. The comparison shall be made in 4-ounce oil sample bottles viewed crosswise.

(c) *Distillation range*. When 100 ml are distilled not more than 5 ml shall distill below 70 °C., not less than 50 ml below 160 °C., and not less than 90 ml below 205 °C.

NOTE.—Any material submitted as pyronate must agree in color, odor, taste and denaturing value with a standard sample furnished by the Bureau of Alcohol, Tobacco and Firearms to chemists authorized to examine samples of denaturants.

#### §21.123 Quassin.

(a) Quassin is the bitter principle of quassia wood (occurring as a mixture of two isomeric forms). It shall be a good commercial grade of purified amorphous quassin, standardized as to bitterness.

(b) *Bitterness*. An aqueous solution of quassin shall be distinctly bitter at a 1 to 250,000 dilution. To test: Dissolve 0.1 gram of quassin in 100 ml of 95 percent alcohol, then dilute 4 ml of the solution to 1,000 ml with distilled water, mix well and taste.

(c) *Identification test*. Dissolve about 0.5 gram of quassin in 10 ml of 95 percent alcohol and filter. To 5 ml of the filtrate, add 5 ml of concentrated hydrochloric acid and 1 mg of phloroglucinol and mix well. A red color develops.

(d) *Optical assay*. When 1 gram of quassin (in solution in a small amount of 95 percent alcohol) is dissolved in

10,000 ml of water, the absorbance of the solution in a 1 cm cell at a wavelength of 258 millimicrons shall not be less than 0.400.

(e) *Solubility*. When 0.5 gram of quassin is added to 25 ml of 190 proof alcohol, it shall dissolve completely.

#### §21.124 Rubber hydrocarbon solvent.

(a) Rubber hydrocarbon solvent is a petroleum derivative.

(b) *Distillation range*. When 10 percent of the sample has been distilled into a graduated receiver, the thermometer shall not read more than 170 °F. nor less than 90 °F. When 90 percent has been recovered in the receiver the thermometer shall not read more than 250 °F.

#### §21.125 Saffrole.

(a) *Congealing point*. 10.0 ° to 11.2 °C.

(b) *Refractive index at 20 °C*. 1.5363 to 1.5385.

(c) *Specific gravity at 15 °/15 °C*. 1.100 to 1.107.

(d) *Odor*. Characteristic odor.

#### §21.126 Shellac (refined).

(a) *Arsenic content*. Not more than 1.4 parts per million as determined by the Gutzeit Method (AOAC method 25.020; for incorporation by reference, see §21.6(c)).

(b) *Color*. White or orange.

(c) *Rosin content*. None when tested by the following method: Add 20 ml of absolute alcohol or glacial acetic acid (m. p. 13 ° to 15 °C.) to 2 grams of the shellac and thoroughly dissolve. Add 100 ml of petroleum ether and mix thoroughly. Add approximately 2 liters of water and separate a portion of the ether layer (at least 50 ml) and filter if cloudy. Evaporate the petroleum ether and test as follows: Solution A—5 ml of phenol dissolved in 10 ml of carbon tetrachloride. Solution B—1 ml of bromine dissolved in 4 ml of carbon tetrachloride. To the residue obtained above add 2 ml of Solution A and transfer the mixture to a porcelain spot plate, filling one cavity. Immediately fill an adjacent cavity with solution B. Cover the plate with a watch glass and observe any color formation in Solution A. A decided purple or deep indigo blue color is an indication of the presence of rosin.